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Information Literacy Skills of Alagappa Chettiar Government College of Engineering & Technology Students in Karaikudi, Tamilnadu: A Case Study

Ayyanar K
Ph.D. Research Scholar, Alagappa University, ayyanar.k1992@gmail.com

Thirunavukkarasu A
Former University Librarian, Alagappa University

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K. Ayyanar
Ph.D. Research Scholar
Department of Library and Information Science
Alagappa University, Karaikudi- 630 003
Tamil Nadu, India
E-mail: ayyanar.k1992@gmail.com

Dr.A. Thirunavukkarasu
Former University Librarian
Alagappa University, Karaikudi- 630 003
Tamil Nadu, India

Abstract

The study analyzed the Information Literacy Skills among 90 Engineering Students of Alagappa Chettiar Government College of Engineering. A well-structured questionnaire was used for data collection and MS Excel software was used for analyzing the data. The study revealed that the majority of the respondents are Male 78(86.7%) and 26(28.8 %) of respondents are Mechanical Engineering (Mech) Students and fewer respondents from Electronics and Communication Engineering (ECE) Students. Most of the respondents 29(32.22%) used the First-year students and fewer respondents from Fourth-year students. All of the respondents 90(100%) used the awareness of ICT and Internet Literacy. Most of the respondents 34(37.77%) used the three years' Experience in handling the internet and fewer respondents from Less than one year. 25(27.77%) of the respondents using internet study purpose; 20(22.22%) of the respondents use the exchange idea purpose and 12(13.33) of the respondents use Research and development purpose; most of the respondents 60(66.66%) use the Google Chrome; 14(15.55%) Others, 10(11.11%) Yahoo; most of the respondents 18(20%) used the engineering e-database IEEE Xplore and fewer respondents from e-database NTIS; most of the respondents 86(95.55%) used the Ms Office and other basic skills of Computer Literacy; 85(94.44%) Laptop & Tablets; 83(92.55%) Basic hardware usages like connecting laptop with projector and 68(75.55%) Using software packages; 78(86.66%) of students are not aware of security risks in sharing of personal information in Net and 12(13.33%) of students are aware of security risks. 81(90%) of students can Access needed information, 73(81.11%) of students are Formulating the need of information and 48(53.33%) of students are not skilled enough to use the accessed information effectively and efficiently.

Keywords: Information Literacy Skills, ICT, literacy meaning and concept, Computer Literacy Internet, Internet resources and services,

1. Introduction

Engineering is a field that is fast developing as a result of scientific and technological advancement. The growth of digital information, the focus on lifelong learning, and the demand for highly skilled workers have highlighted the need for information-related competencies. Thus, engineering students need to be equipped with strong information literacy skills to succeed in their academic and future professional endeavors.

American Library Association defines an information literate person as one who is able to recognize when information is needed and to locate, evaluate and use the needed information effectively. UNESCO includes information literacy skills as part of the wide-ranging information and communication technology (ICT) literacy skills. A student who possesses ICT literacy skills should be able to recognize information needs and use information and communication technology (ICT) features and applications to access, retrieve, store, manage, integrate, evaluate, create and communicate information effectively. In addition, he or she should also understand the ethical and legal use of information.

Literacy: Meaning and Concept

Literacy is a simple process of acquiring basic cognitive skills. Literacy is using these skills in ways that contribute to socio-economic development. Literacy is developing the capacity for social awareness and critical reflection as a basis for personal and social change.

Originally, the word ‘literate’ meant to be ‘familiar with literature’ or, more generally, ‘well-educated, learned’. Only since the late nineteenth century has it also come to refer to the abilities to read and write a text while maintaining its broader meaning of being ‘knowledgeable or educated in a particular field or fields’. (UNESCO, 2006).

Need for Information Literacy:

All the academic institutions are witnessing rapid growth in computer networking and the use of computerized databases to access information in their libraries. In fact, most academic libraries today are “hybrid libraries”, adding the new e-library features to their traditional library services. Information literacy is therefore essential for college students and faculties to cope with new online services and provide a competitive advantage to themselves and the wider society. Without training, it is difficult to use electronic information sources effectively. It is necessary for users to have the requisite skills to obtain relevant information quickly and effectively from electronic sources and become what is often referred to as ‘Information literate’

2. Review of Literature

Kumari and Mallaiah (2017) undertook a study to determine digital information literacy skills among faculty members of engineering colleges in Mangalore, Karnataka: A study. The study discussed the highlights the ways and means the faculty members search the information from

different digital information sources. The survey method was adopted for the present study and a structured questionnaire was administered to collect the data. Totally 350 questionnaires were distributed among faculty members, out of which 240 filled in questionnaires were received. The study finds the digital information resources used by the faculty members to get information relating to their own areas. The study will definitely help to organize different information literacy programs in the college to promote and to develop the information literacy skills among faculty and to improve the teaching quality.

Nachiappan & Jeyshankar (2015) reported that search engines are widely used web tools by the students and scholars in the university to search for the information. Almost 90 percent of the respondents start browsing with search engines and spent more than one hour a day using search engines for the purpose of finding academic information. The study revealed that search engine users lye in the age group of 21-25. The respondents opened at least two link pages on the search engines results to get the needed information. They opined that the use of search engines is significantly increased by day today.

Jessy A Shivananda Bhat and Mahabaleshwara Rao (2016) in their paper entitled "Assessing the Effectiveness of Information Literacy Instruction Program: Pre and Post Evaluation Case Study". A study was conducted by the library for the first time, to assess the effectiveness of information literacy instruction focused on an academic specialization, during an ILI session held for the postgraduate students of Pharmaceutical Sciences course from Manipal University, Manipal, through a pre and post evaluation survey. Data was collected through survey prior to IL session and through feedback response at the end of the literacy program. Structured questionnaires were distributed to all the participants (125) before and after the instruction program conducted by the librarian. A total of 14 questions were given in the questionnaire to assess the students' the data was analyzed using Excel and SPSS software. The concluded of the study identify the areas that are needed to be focused upon while designing the future IL programs to be conducted by the library for the user community. This method of pre and post ILI evaluation study is helpful in assessing the effectiveness of information literacy programs in academic libraries.

3. Objectives of the Study

- To find out the Information Literacy skills among Engineering college students in Karaikudi
- Assess students' knowledge of information literacy skills and mastery of information Search skills
- To identify areas of strengths and weakness in information search techniques used by the students.
- To find out the internet, computer, emotional and ethical Literacy skills among engineering college students in Karaikudi.
- To understand the need for induction of IL training programs

- To elicit the knowledge of modern communication tools related to Information Technology.

4. Scope of the Study

The study mainly focuses on the Information literacy skills of Engineering students in identifying, locating, searching, accessing, retrieving and using information from both print and electronic sources of information. The sample of this study covers 90 students out of the 100 respondents, assessment of information literacy.

5. Methodology

The survey research design was used for the study. The total population includes 90 registered users of the literacy skills made up of engineering students from Alagappa Chettiar Government College of Engineering. A questionnaire has been prepared in such a way that the respondents could easily understand the items. A total number of 100 questionnaires were distributed among the respondents. The investigator could collect questionnaires from only 90 out of 100 respondents among whom the questionnaires were distributed. This constitutes 90% (90/100) of the total response.

6. Data Analysis and Findings

This study is based on the Survey (questionnaire) Method. A structured questionnaire was designed to collect data from Engineering Students at Alagappa Chettiar Government College of Engineering & Technology. Keeping in mind the basic objectives of the study.

Table 1: Gender -wise Distribution

S. No	Gender	No. of Respondents	Percentage
1	Male	78	86.7
2	Female	12	13.33
Total		**90**	**100**

Table 1 shows that gender-wise distribution of respondent of Alagappa Chettiar Government College of Engineering & Technology resources Maximum of the 78 Male out of 90 and 12 Students are Female.

Table 2: Nativity – Wise Distribution Respondents

S. No	Nativity	No. of Respondents	Percentage
1	Urban	32	35.55
2	Semi-urban	20	22.22
3	Rural	38	42.22
Total		**90**	**100**

Table 2 shows that indicates the category-wise distribution of Engineering Students, the total number of respondent 90 out of 100, 32(35.55%) of the respondents are from Urban, 38(42.22%) of the respondents are from Rural and 20(22.22%) of the respondents are semi-urban.

Table 3: a program of study wise frequency distribution of participants

S. No	Program of study	No. of Respondents	Percentage
1	Computer Science and Engineering (CSE)	15	16.66
2	Mechanical Engineering (Mech)	26	28.8
3	Civil Engineering (Civil)	13	14.44
4	Electrical and Electronics Engineering (EEE)	24	26.66
5	Electronics and Communication Engineering(ECE)	12	13.33
Total		**90**	**100**

Table 3 shows that the most of the respondents are students from the Department of Mechanical Engineering (Mech) 26(28.8%), followed by department of Electrical and Electronics Engineering (EEE) 24(26.66%), department of Computer Science and Engineering(CSE) 15(16.66%), department of Civil Engineering(Civil) 13(14.44%), and department of Electronics and Communication Engineering(ECE) 12(13.33 %) respectively.

Table 4: Year-wise distribution of respondents

S. No	Year	No. of Respondents	Percentage
1	First Year	29	32.22
2	Second Year	23	25.55
3	Third Year	20	22.22
4	Fourth Year	18	20.0
Total		**90**	**100**

Table 4 shows that indicates the Year-wise distribution of Engineering Students, the total number of respondent 90 out of 100, 29(32.22%) of the respondents are from First-year students. 23(25.55%) of the respondents are from Second-year students. 20(22.22%) of the respondents are Third-year students and 18(20%) of the respondent are Fourth-year students.

Table 5: Awareness of ICT and Internet Literacy

S. No	Awareness of ICT and Internet Literacy	No. of Respondents	Percentage
1	Yes	90	100
2	No	0	0
Total		**90**	**100**

The table 5 shows that 90 (100%) respondents were Awareness of ICT and internet literacy awareness of all students and Zero percentage respondents are not aware of it.

Table 6: Experience in Handling Internet

S. No	Experience in Handling Internet	No. of Respondents	Percentage
1	Less than 1 year	8	8.88
2	2 years	23	25.55
3	3 years	34	37.77
4	More than 4 years	25	27.77
Total		**90**	**100**

Table 6 Shows 34(37.77%) of students are very experienced in using the Internet for 3 years, 25(27.77%) of students are using for more than 4 years and 23(25.55%) are using for 2years and only 8(8.88%) are not skilled in internet accession

Table 7: Purpose of Using the Internet

S. No	Purpose	No. of Respondents	Percentage
1	Studying	25	27.77
2	Publishing journal article	15	16.66
3	Research and Development	12	13.33
4	Project	18	20.0
5	To exchange ideas	20	22.22
Total		**90**	**100**

The table 7 shows that 25(27.77%), respondents used internet to Studying purpose with current record, followed by 20(22.22%) for to Exchange idea purpose, 18(20%) Project, 15(16.66%) of the respondents for Publishing journal article and 12(13.33%) for Research and Development,

Table 8: Search Engine

S. No	Purpose	No. of Respondents	Percentage
1	Google	60	66.66
2	Bing	6	6.66
3	Yahoo	10	11.11
4	Other	14	15.55
Total		**90**	**100**

Table 8 shows the respondent's use of a search engine. It is clear that majority of the respondents 60(6.66%) Using Google search engine, followed by Another search engine 14(15.55%), Yahoo 10(11.11%) and Bing search engine 6(6.66%).

Table 9: Frequently used Engineering E-databases

S. No	Database	No. of Respondents	Percentage
1	IEEE Xplore	18	20.0
2	Compendex	7	7.77
3	Inspec	6	6.66
4	NTIS	5	5.55
5	Web of science	9	10.0
6	ASCM	11	12.22
7	ASCE	12	13.33
8	SCIENCE DIRECT	14	15.55
9	PROQUEST	8	8.88
Total		**90**	**100**

The analysis in table 9 shows that 18(20%) of respondents are searching IEEE Xplore database, 14(15.55%) of respondents searching for science direct database of Elsevier science and followed by ASCE 12(13.33%), ASCM 11(12.22%) and complex and 7(7.77%) least rated of 5(5.55%) NTIS database.

Table 10: Computer Literacy

S. No	Experience in Handling Computer	No. of Respondents	Percentage %
1	Ms Office and other basic skills	86	95.55
2	Using software packages	68	75.55
3	Basic Hardware usage like connecting Laptop with projector etc	83	92.22
4	Using Laptop & Tablets	85	94.44

Table 10 shows Ms Office and other basic computer skills are 86(95.55%) among students and 85(94.44%) of them are using their own Laptops and Tablets in their curricular aspects. 83(92.22%) of students are skilled in Basic Hardware usage like connecting Laptop with projector and 68(75.55%) of students are skilled in using software packages like SPSS etc.

Table 11: Emotional Literacy

S. No	Aware of Security in Sharing Personal Information	No. of Respondents	Percentage
1	Yes	12	13.33
2	No	78	86.66
Total		**90**	**100**

Table 11 shows that 78(86.66%) of students are not aware of security risks in sharing of personal information in Net and 12(13.33%) of students are aware of security risks

Table 12: Ethical Literacy

S. No	Aware of Copyright Issues / Plagiarism	No. of Respondents	Percentage
1	Yes	56	62.22
2	No	34	37.77
Total		**90**	**100**

Table 12 shows that 56(62.22%) of students are aware of Plagiarism and 34(37.77%) of students are not aware of it.

Table 13: Level of Information Literacy Skills

S. No	Level of Information Literacy Skills	No. of Respondents	Percentage
1	Formulating the need for information	73	81.11
2	Accessing needed information	81	90
3	Using information effectively	48	53.33

Table 13 shows that 81(90%) of students can Access needed information, 73(81.11%) of students are Formulating the need of information and 48(53.33%) of students are not skilled enough to use the accessed information effectively and efficiently.

7. Conclusion

Majority of the respondents are Accessing the use of the Internet. Most of the respondents are the first to graduate. 100 out of 90 respondents use computer facilities of engineering students. This study shows the used internet using which is very common among the students and engineering students of Alagappa Chettiar Government College of Engineering & Technology Karaikudi. This study focuses that the majority of Mechanical Engineering (Mech) students depend on information literacy skills to get the desired and relevant information for their research. The present study concluded that the engineering students in Alagappa Chettiar College of engineering need proper training in the use of internet and information search tools. Users suggested that college students must need internet Wi-Fi technology on the college campus. This study suggests some measure to achieve effective and efficient utilization of e-resources used for the research scholar.

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